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The findings of several tests are used to describe some learning disabilities and patterns common in lower-class Puerto Rican and Negro children. In particular, perceptual dysfunction is pointed to as a major causal factor in the reading problems of the disadvantaged. In one urban slum school, 40 percent of first graders showed serious dysfunction when evaluated on the Frostig visual perception test, with Puerto Ricans and Negroes scoring significantly lower than whites and Chinese. Based on clinical impressions from 50 cases, the information and vocabulary subtests of the WISC appear to differentiate the disadvantaged from the advantaged. In addition, the Diagnostic Test of Word Attack Skills shows a pattern of inability to distinguish between grapheme and phoneme and to discriminate blends. Although class differences are found in articulation and dialect patterns, problems in these areas do not affect reading achievement. Emotional disturbance among retarded readers is not related to class or ethnic status. It is felt that environmental influences are the likely determinants of perceptual dysfunction, in which the differentiating variable is quantitative. Remediation need not involve devices, but corrective teaching must be specifically appropriate to lower-class rather than middle-class pupils. (NH)

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Some Learning Disabilities of Socially Disadvantaged Puerto Rican and Negro Children

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SOME LEARNING DISABILITIES OF SOCIALLY DISADVANTAGED PUERTO RICAN AND NEGRO CHILDREN

S. Alan Cohen. Ed.D.

This paper indicates that we have overlooked perceptual dysfunction as a major causal factor in the reading and learning problems of disadvantaged children

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Introduction

Most middle class children enter school either reading, or so close to it that mediocre materials and methods are good enough to get them by the Stanford Achievement Tests.

Not so with Puerto Rican and Negro children in slum schools.

The school's tendency is to blame these children by labelling them "culturally deprived." If they are middle class we may label them "dyslexic" or "SLD;" lately the term "perceptual dysfunction" is in vogue. These are convenient labels when teachers are unable or unwilling to isolate specific behaviors, strengths and weaknesses that relate to children's reading and language problems.

Our work with slum children suggests that "cultural deprivation" includes many behaviors we see in dyslexia, SLD and perceptual dysfunction. Our work further indicates that most of these behaviors are remediable. Finally our work suggests these behaviors can be prevented if the school recognizes that lower class Negro and Puerto Rican children will not respond to mediocrity, inefficiency and incompetency as readily as middle class children who seem to learn in spite of the school.

This paper describes some learning disabilities and patterns common in lower class Puerto Rican and Negro children. When we isolate these disabilities we remediate them. When we design curriculum for slum schools we anticipate these patterns and teach to the specific behaviors in the disability syndrome. We suggest that severe reading retardation rates in slum schools would be significantly reduced if schools would cease labelling these children and begin to isolate and teach to their specific behaviors.

Dr. Cohen, Director of the Reading Center, Farkauf Graduate School, Yeshiva University, New York, has written extensively in the field of reading disability.

Reading Retardation Rate

The reading retardation rate among socially disadvantaged children is more serious than many educators are willing to admit to themselves. For example in one section of a large city 21,000 children, most of whom are socially disadvantaged, attend public schools. Table I shows the low percentage of on-grade achievers in grades three and eight(2).

TABLE I

PERCENTAGE DISTRIBUTION BY ETHNIC GROUP OF CHILDREN READING AT GRADE LEVEL IN A SLUM SCHOOL DISTRICT.

Ethnicity	Grade	N	% at Grade Level
Puerto Ricans		489	9.80
Negroes	3.5	626	18.69
Whites, Others		606	54.79
Total		1721	21.58
Puerto Ricans		235	13.19
Negroes	8.5	138	28.99
Whites, Others		489	52.77
Total		862	38.77

According to this table about 90% of the Puerto Rican children in grade three are reading below grade level. They comprise approximately half the third grade population. About 81% of the Negro children are retarded readers. They comprise about 22% of the third grade population. About 45% of the White and others are retarded readers. Midway through grade eight the worst achievers have already dropped out of school. Of the remaining group, over 60% are retarded in reading on standardized tests; about one out of three is three or more years retarded in reading.

The children in this study are not as socially disadvantaged as others we have observed in Bedford Stuyvesant, Washington, D. C., Boston's South End, Chicago's South Side, southern Mississippi, Appalachia and other areas of the nation.

For three years we have researched learning disability factors as well as methods and materials of remediation. We have found the following patterns:

Perception

A study of perceptual development of first graders (3) from the same population reported in Table I revealed that 40% were severely dysfunctioning on Marianne Frostig's Developmental Test of Visual Perception (8). Over 50% earned perceptual quotients (PQ) below 100. Table II reports PQ's of the sample of first graders in the study.

TABLE II

PERCEPTUAL QUOTIENTS (PQ) OF SAMPLE OF FIRST GRADERS STUDIED ON THE FROSTIG TEST (N = 119)

X	S.D.	Min. PQ	Max. PQ
95.87	13.22	67.00	126.00

The degree of dysfunctioning was so severe that the Frostig survey was followed up with a clinical evaluation of 15 children randomly selected from the population. Not one child could fixate on a visual target for more than 10 seconds under optimal conditions. Thirteen of the children had inaccurate kinesthetic awareness of their own bodies. They were motorically uncoordinated.. Body image was poor; laterality was not developed in eleven out of fifteen children. As a result directionality was inefficient. Eleven out of 15 children demonstrated poor binocularity on the Brock String Test (4). One of the author's staff members observing the testing commented, "These kids are actually spastic!"

Socially disadvantaged children treated at the clinic of Yeshiva University's Reading Center reveal low quality drawings on the Benton Visual Retention Test (1). These Benton protocols are not deficient according to the scoring manual, but they are crude, choppy and display poor closure at the angles.

On the Wechsler Intelligence Scale for Children (WISC) these children score low on Block Design but do adequately on the Coding subtest.

When the Frostig data is analyzed for ethnicity we find striking differences. Puerto Rican and Negro children's PQ's are significantly lower than White and Chinese children's PQ's.

Negro children outscore Puerto Rican, White and Chinese in Eye Motor Coordination (Frostig Subtest 1), but they are still below average as a group. Lowest scores for the entire population are on the Shape Constancy subtest with not a single Puerto Rican child scoring at maximum. Thus in a subtest with a low ceiling for first graders tested in April, not one in 65 Puerto Ricans could "max" the test while at least one of six Chinese, one out of nine Whites and one out of thirty-nine Negro children did earn a top score.

The Shape Constancy subtest of the Frostig may have special significance in relation to reading retardation. In a pilot study recently completed by a Yeshiva University graduate student it correlated most highly with reading in Negro children amongst all Frostig subtests, Stanford-Binet, Bender Gestalt (Kopitz scoring) and other tests. There is some question, however, about the administration of the test that may account for its unusual predictive coefficient with various measurements of reading.

Intelligence Tests

Obviously socially disadvantaged children score low on group intelligence tests. On the WISC protocols at the Reading Center clinic at Yeshiva University they tend to score slightly higher in performance over Verbal scores. A number of children surprise us, however, with very high Verbal and lower Performance scores in spite of all other symptoms of poor verbal development we usually see in the socially disadvantaged child.

Both groups of children tend to earn lower Information and Vocabulary than Comprehension scores. This appears to be a persistent pattern differentiating socially disadvantaged from more advantaged children. In fact many middle and upper middle class children tend to have the very reverse pattern. It appears that children from the "wrong" side of the tracks lack information about the world perceived by middle class children. But they are more capable than middle class children in making their way in the practicalities of everyday life.

The Digit Span subtest may be high or low depending upon anxiety level and concentration ability. Arithmetic subtest scores are low and seem to be more a result of poor school achievement than anything else. What has surprised us at the Reading Center is the Similarities subtest which appears to tap verbal abstraction ability and concept formation. Some disadvantaged children score very low—this fits the stereotype of cultural deprivation. But a large number of cases with depressed total IQ's score above average on this subtest. According to Wechsler(10) this subtest is one of his weaker measures, but we are still unable to explain this phenomenon.

Our impressions of the WISC Performance scatter show Block Design low but nothing else that might discriminate disadvantaged from more advantaged children with reading problems. It appears that the subtest scatter is more pronounced on the Verbal than on the Performance tests.

These are clinical impressions based on about 50 WISC protocols, a tenuous evaluation at best.

Word Attack Skills

Studies using the Diagnostic Test of Word Attack Skills (DTWAS)(5) have supplied us with abundant data for firm conclusions about word attack skills patterns in this population. DTWAS is a series of 10

short tests of various phonic skills developed by the author and Dr. Robert Cloward, Director of Educational Research, Mobilization For Youth in New York City. It is a group-administered version of an individually administered test developed at Boston University by Dr. Mabel Noall and this author. The DTWAS data is verified by patterns found on the Durrell Analysis of Reading Difficulty Kit and a number of clinical tests used in the Yeshiva University Reading Center.

Most Negro and Puerto Rican children tested in various projects over the past three years are sight readers. They have never learned the relationship between grapheme and phoneme. Over 50% of junior high school pupils in one slum school district tested by this author did not know the alphabet. Most elementary school disadvantaged children cannot blend sounds.

Visual discrimination of letters is weak but better than scores on auditory discrimination of sounds in words tested on various levels of difficulty (matching, identification, reproduction). Beginning consonants are usually heard well enough, but ending consonants, beginning blends, ending blends and medial vowel sounds are almost always missed by these children on our tests of auditory discrimination. Ability to hear beats in words, however, is excellent when the children understand what is asked of them.

Visual memory of unknown words is lower than visual discrimination of known words, but this too is far below expectancy.

When we look at these patterns we cannot help concluding that these specific behavior deficits are what we usually find in most retarded readers, economically disadvantaged or not.

Reading Patterns

Oral reading scores are low, of course, but comprehension scores are high. Listening comprehension scores are significantly higher. Usually these scores are at grade placement indicating skills problems rather than problems of intellectual potential. This again is the usual pattern in retarded readers regardless of ethnicity or economic status.

Oral Language Patterns

Much has been said about oral language patterns of Negro and Puerto Rican Children. Most of it has no basis in fact. We have not found any difference in the incidence of speech impediments between middle class and lower class children. We have found differences in articulation and dialect patterns. The studies show no difference in verbal productivity of middle class and lower class children except when the latter are requested to speak to adult authority figures. There is no evidence that dialect differences or mild articulation problems interfere with learning to read. There is no evidence that oral language training in pre-K or K affects reading achievement. In fact everything we have seen indicates that Negro and Puerto Rican children with heavy dialects and relatively poor articulation learn to read when they are taught without oral language development training.

Psycho-Social Factors

Our own observations and studies do not show differences in emotional problems of retarded readers from middle class homes compared to lower class homes. The research in general does not indicate that a higher incidence of psychological problems exists in lower socio-economic groups than in middle income groups. Certainly there are serious sociological differences. But nothing we have observed or measured indicates that lower class Negro and Puerto Rican retarded readers are more or less emotionally disturbed than white middle class retarded readers. Furthermore, nothing we have observed or measured

indicates that psychological or sociological problems are particularly difficult to overcome in the remedial process. The very basis of the clinical treatment and the classroom curriculum is a therapeutic atmosphere, one in which the child feels safe enough to test new behaviors. Under these conditions, rare in most schools but necessary in all, most of these children learn to read and write adequately.

General Hunches and Conclusions

It appears that disadvantaged children have a higher incidence of perceptual dysfunctions than test norms predict. Problems with shape constancy appear to be one major result of this, but more important perhaps, are the basic motor, kinesthetic and laterality problems that led Pasamanick(9) to use "organicity" as an explanation. While a higher incidence of physiological deficiencies of many sorts could be expected in a low socio-economic population, an explanation in terms of development, opportunity and interaction with environment seems more plausible to this author.

Intelligence, a term describing a collection of test results tapping various learned cognitive behaviors, is lower in these populations. As a measurement of scholastic aptitude, intelligence tests accurately predict lack of school success experienced by so many disadvantaged children. When we look at WISC subtest patterns we see youngsters operating exceedingly well with a minimum of information and with marked verbal deficits. We see also the deficits caused by the perceptual dysfunctions revealed in other tests of "pure" perception.

Unlike our conclusions about perceptual dysfunctions, the WISC patterns are not statistically validated but are impressions of protocols of clinic cases from Yeshiva University Reading Clinic. They must be taken as hunches.

Poor visual discrimination of letters, the usual p-b-d-q reversals, poor visual memory for unknown words, and poor visual recognition of known words are common among these children according to our studies. These children do not know the alphabet and their auditory discrimination of sounds in words is exceedingly deficient.

When we add to these factors a myriad of socio-economic and cultural conditions that contribute to general deprivation, we have a difficult case of learning disability.

On the other hand, the specific behaviors that form the disability syndrome are not peculiar to disadvantaged children. Qualitatively the patterns described in this paper are found in many middle class children we see in our clinic with the possible exception of the WISC patterns. The difference appears to be a quantitative one; i.e., more socially disadvantaged children have more of these disabilities than do middle class children.

Finally our work in the clinic as well as numerous curriculum projects we have conducted during the past three years have demonstrated that most of these children can learn to read and write in spite of their psycho-social problems and their language deficits. Most of the disabilities reviewed are remediable without resorting to magic mirrors, talking typewriters or any form of educational hoopla. Most of these children will learn to read and write if the schools will teach them thoroughly. But if the schools teach them the way they have taught middle class children—and that is not thoroughly—then socially disadvantaged children will not respond (6,7).

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